

METHOD AND APPARATUS CONTROLLING COMMUNICATION
IN THE MAIN FLEX AND BRIDGE FLEX CIRCUITS FOR
MULTIPLE MICRO-ACTUATORS IN A HARD DISK DRIVE

ABSTRACT OF THE DISCLOSURE

The present invention includes communication between a servo-controller and micro-actuators, which position multiple read-write heads, which occurs through sharing a bundle of wires with the micro-actuators. The invention is applicable to disk drives including both hard disk drives and optical disk drives. When accessing a disk surface, all micro-actuators perform
5 the same positioning, insuring the proper positioning of the read-write head above the accessed disk surface. The invention applies to co-located and/or non co-located micro-actuators. The wire bundle may include one or two active signal wires. The invention includes a flex circuitry assembly implementing the communication, a voice coil actuator built with the flex circuitry, and a hard disk drive built with the voice coil actuator, as well as the methods of making these
10 components.